

CLAIMS:

1. A control agent delivery system comprising a projectile and a projectile launching device, the projectile launching device comprising a pressurized gas source communicating with a tubular barrel and the projectile comprising slidably engageable body and cap members made of a destructively deformable material, the body and cap members each further comprising an elongated, substantially cylindrical sidewall section having one closed, convex end and one open end, the open end of the body member being insertable inwardly of and in frictional engagement with the open end of the cap member, the projectile containing a control agent selected from the group consisting of pesticides, herbicides and fungicides in at least one of a liquid, gel or powder form.
2. The control agent delivery system of claim 1 wherein the destructively deformable material is gelatin having a moisture content ranging from about 5 to about 20 weight percent moisture.
3. The control agent delivery system of claim 2 wherein the destructively deformable material is gelatin having a moisture content ranging from about 5 to about 15 weight percent.
4. The control agent delivery system of claim 1 wherein the destructively deformable material is gelatin having a moisture content of about 10 percent.
5. The control agent delivery system of claim 1 wherein the body and cap members are each made of grafted starch.

6. The control agent delivery system of claim 1 wherein the body and cap members are each made of a flexible, polymeric material.

7. The control agent delivery system of claim 1 wherein at least one of the body and cap members further comprises a distinguishing indicia.

8. The control agent delivery system of claim 1 wherein the distinguishing indicia is a colorant.

9. The control agent delivery system of claim 1 wherein the pressurized gas source comprises compressed carbon dioxide.

10. The control agent delivery system of claim 1 wherein the pressurized gas source comprises compressed gas selected from the group consisting of air, nitrogen, carbon dioxide, and mixtures thereof.

11. The control agent delivery system of claim 1 wherein the projectile further comprises at least one of a filler material or diluent.

12. The control agent delivery system of claim 10 wherein the filler material is selected from the group consisting of diatomaceous earth, fumed silica, cornstarch and mixtures thereof.

13. The control agent delivery system of claim 1 wherein the control agent is a pesticide selected from the group consisting of pyrethrin, piperonyl butoxide, permethrin, chlorpyrifos, propoxur, bacillus thuringiensis, hydromethylnon and fipronil.

14. The control agent delivery system of claim 1 wherein the control agent is a herbicide selected from the group consisting of bromacil, dicamba and glyphosate.

15. The control agent delivery system of claim 1 wherein the control agent is a fungicide selected from the group consisting of benomyl, cyproconazole and imazalil.

16. The control agent delivery system of claim 1 wherein the projectile comprises at least one pesticide and at least one pest attractant.

17. The control agent delivery system of claim 15 wherein the pest attractant is a feeding attractant.

18. The control agent delivery system of claim 15 wherein the pest attractant is a pheromone.

19. The control agent delivery system of claim 1 wherein the projectile has a length-to-diameter ratio ranging between about 1.58 and about 1.94.

20. The control agent deliver system of claim 1 wherein the projectile has a filled weight greater that about 0.35 grams.

21. The control agent delivery system of claim 1 wherein the projectile has a filled weight ranging from about 0.5 to about 1.0 grams.

22. A method for dispersing a control agent with a target area, the method comprising the steps of:

providing a projectile comprising one each of slidably engageable body and cap members made of a destructively deformable material; the
 5 body and cap members each further comprising an elongated, substantially cylindrical sidewall section having one closed, convex end and one open end; the open end of the body member being inserted inwardly of and into frictional engagement with the sidewall section of the cap member; the projectile containing a control agent selected from the group consisting of
 10 pesticides, herbicides and fungicides in at least one of a liquid, gel or powder form;

providing a projectile launching device comprising a pressurized gas source communicating with a tubular barrel;

selectively loading the projectile into the projectile launching device
 15 with the closed end of the cap member forwardly facing;
 aiming the projectile launching device toward the target area; and
 actuating the pressurized gas source to launch the projectile toward the target area.

23. The method of claim 22 wherein the projectile is propelled toward the target area by a burst of compressed gas that is applied to the projectile within the projectile launching device.

24. The method of claim 23 wherein the compressed gas is selected from the group consisting of air, nitrogen, carbon dioxide and mixtures thereof.

25. The method of claim 22 wherein the projectile further comprises at least one of a filler material and a diluent.

26. The method of claim 22 wherein the projectile comprises a filler material selected from the group consisting of diatomaceous earth, fumed silica, cornstarch and mixtures thereof.

27. The method of claim 22 wherein the control agent is a pesticide selected from the group consisting of pyrethrin, piperonyl butoxide, permethrin, chlorpyrifos, propoxur, bacillus thuringiensis, hydromethylnon and fipronil.

28. The method of claim 22 wherein the control agent is a herbicide selected from the group consisting of bromacil, dicamba and glyphosate.

29. The method of claim 22 wherein the control agent is a fungicide selected from the group consisting of benomyl, cyproconazole and imazalil.

30. The method of claim 22 wherein the projectile comprises at least one pesticide and at least one pest attractant.

31. The method of claim 30 wherein the pest attractant is a feeding attractant.

32. The method of claim 30 wherein the pest attractant is a pheromone.

33. The method claim 22 wherein the projectile is launched at a velocity ranging from about 600 to about 1000 feet per second.

34. The method of claim 33 wherein the projectile is launched at a velocity of about 600 feet per second.

35. The method of claim 22 wherein the projectile weighs from about 0.5 to about 1.0 grams.

36. The method of claim 22 wherein the projectile has a length-to-diameter ratio ranging between about 1.58 and about 1.94.

37. The method of claim 22 wherein the body and cap members are made of gelatin having a moisture content ranging between about 5 and 20 weight percent.

38. The method of claim 37 wherein the body and cap members are made of gelatin having a moisture content ranging between about 5 and 15 weight percent.

39. The method of claim 22, comprising the step of positioning the projectile launching device about 15 feet from the center of the target area prior to launching the projectile.

40. A method for delivering a control agent to a target, the method comprising the steps of:

- providing a projectile comprising one each of slidably engageable body and cap members made of a destructively deformable material; the
- 5 body and cap members each further comprising an elongated, substantially cylindrical sidewall section having one closed, convex end and one open end; the open end of the body member being inserted inwardly of and into frictional engagement with the sidewall section of the cap member; the projectile containing a control agent selected from the group consisting of
- 10 pesticides, herbicides and fungicides in at least one of a liquid, gel or powder form;
- providing a projectile launching device comprising a pressurized gas source communicating with a tubular barrel;
- selectively loading the projectile into the projectile launching device
- 15 with the closed end of the body member forwardly facing;
- aiming the projectile launching device toward the target; and
- actuating the pressurized gas source to launch the projectile toward the target.

41. The method of claim 40 wherein the projectile is propelled toward the target area by a burst of compressed gas that is applied to the projectile within the projectile launching device.

42. The method of claim 41 wherein the compressed gas is selected from the group consisting of air, nitrogen, carbon dioxide and mixtures thereof.

43. The method of claim 40 wherein the projectile further comprises at least one of a filler material and a diluent.

44. The method of claim 40 wherein the projectile comprises a filler material selected from the group consisting of diatomaceous earth, fumed silica, cornstarch and mixtures thereof.

45. The method of claim 40 wherein the control agent is a pesticide selected from the group consisting of pyrethrin, piperonyl butoxide, permethrin, chlorpyrifos, propoxur, bacillus thuringiensis, hydromethylnon and fipronil.

46. The method of claim 40 wherein the control agent is a herbicide selected from the group consisting of bromacil, dicamba and glyphosate.

47. The method of claim 40 wherein the control agent is a fungicide selected from the group consisting of benomyl, cyproconazole and imazalil.

48. The method of claim 40 wherein the projectile comprises at least one pesticide and at least one pest attractant.

49. The method of claim 48 wherein the pest attractant is a feeding attractant.

50. The method of claim 48 wherein the pest attractant is a pheromone.

51. The method claim 40 wherein the projectile is launched at a velocity ranging from about 600 to about 1000 feet per second.

52. The method of claim 51 wherein the projectile is launched at a velocity of about 600 feet per second.

53. The method of claim 40 wherein the projectile weighs from about 0.5 to about 1.0 grams.

54. The method of claim 40 wherein the projectile has a length-to-diameter ratio ranging between about 1.58 and about 1.94.

55. The method of claim 40 wherein the body and cap members are made of gelatin having a moisture content ranging between about 5 and 20 weight percent.

56. The method of claim 55 wherein the body and cap members are made of gelatin having a moisture content ranging between about 5 and 15 weight percent.

57. The method of claim 40, comprising the step of positioning the projectile launching device from about 25 to about 30 feet from the target prior to launching the projectile.